UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
Seattle, WA 98115

Refer to:
2002/00986

October 15, 2002

Michael S. Mayer
Fish and Wildlife Biologist
Bonneville Power Administration
P.O. Box 3621
Portland, OR 97208-3621

Re: Endangered Species Act Section 7 Formal Consultation and Magnuson-Stevens Act Essential Fish Habitat Consultation for the Grande Ronde Mainstem Fish Habitat Enhancement Project Phase II, Upper Grande Ronde River Subbasin, Union County, Oregon.

Dear Mr. Mayer:

Enclosed is a biological opinion (Opinion) prepared by the National Marine Fisheries Service (NOAA Fisheries) pursuant to section 7 of the Endangered Species Act (ESA) on the effects of the proposed Grande Ronde Mainstem Fish Habitat Enhancement Project Phase II in Union County, Oregon. In this Opinion, NOAA Fisheries concludes that the proposed action is not likely to jeopardize the continued existence of ESA-listed Snake River (SR) steelhead *(Oncorhynchus mykiss)* or SR spring/summer chinook salmon *(O. tshawytcha)*, or destroy or adversely modify designated critical habitat. As required by section 7 of the ESA, NOAA Fisheries included reasonable and prudent measures with nondiscretionary terms and conditions that NOAA Fisheries believes are necessary to minimize the impact of incidental take associated with this action.

This Opinion also serves as consultation on essential fish habitat (EFH) for chinook salmon under Public Law 104-267, the Sustainable Fisheries Act of 1996, as it amended the Magnuson-Stevens Fishery Conservation and Management Act.

If you have any questions regarding this consultation, please contact Catherine Broyles of my staff in the Oregon Habitat Branch at 541.975.1835 ext. 223.

Sincerely,

for Michael R Crouse

D. Robert Lohn
Acting Regional Administrator

cc: Allen Childs, CTUIR
Mark Roberston, USFWS
Tim Walters, ODFW
Jim Webster, CTUIR

Endangered Species Act - Section 7 Consultation
&
Magnuson-Stevens Act
Essential Fish Habitat Consultation

BIOLOGICAL OPINION

Grande Ronde Mainstem Fish Habitat Enhancement Project, Phase II
Union County, Oregon

Agency:	Bonneville Power Administration
Consultation Conducted By:	NOAA Fisheries, Northwest Region
Date Issued:	October 15, 2002
Issued by:	Michael R Crouse F.r D. Robert Lohn Regional Administrator
Refer to:	**2002/00986**

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1. ENDANGERED SPECIES ACT

1.1 Background

On August 16, 2002, the National Marine Fisheries Service (NOAA Fisheries) received a letter dated August 15, 2002, with an attached biological assessment (BA), from the Bonneville Power Administration (BPA) requesting Endangered Species Act (ESA) section 7 informal consultation regarding the potential effects of the actions associated with the Grande Ronde Mainstem Fish Habitat Enhancement Project Phase II on Snake River (SR) steelhead and SR spring/summer chinook salmon and their designated critical habitat. On August 28, 2002, NOAA Fisheries issued a nonconcurrence letter requesting that the BPA initiate formal consultation on the project. It was stated in this letter that NOAA Fisheries had sufficient information to issue an Opinion and would do so within 90 calendar days after the receipt date unless notified by the BPA. NOAA Fisheries' decision to issue an unsolicited Opinion is based on the substantial amount of in-water work being done as a part of the project and the anticipated short-term adverse effects these activities will have on listed fish. Details regarding the project description, local listed fish populations, and the potential effects of the project are discussed both in the BA and sections 1.2, 1.4.1, and 1.5.1 of this Opinion.

The action area includes a 1.5 mile reach of the mainstem Grande Ronde River between the Birdtrack Springs area and the La Grande Rifle Club property within the Upper Grande Ronde River (UGRR) Drainage, in the upper portion of the UGRR Subbasin (USGS HUC 17060104). The confluences of Bear Creek and Jordan Creek with the mainstem of the Grande Ronde River are both within the proposed action area. A portion of the property within the action area is owned and managed by a private land owner with the remainder of the project area belonging to the U.S. Forest Service (USFS), La Grande Ranger District (LGRD). This project is funded by the BPA and administered by the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) with technical assistance and additional funds provided by the Oregon Department of Fish and Wildlife (ODFW), Natural Resource Conservation Service (NRCS), Oregon Department of Transportation (ODOT), Grande Ronde Model Watershed Program (GRMWP), and the Oregon Watershed Enhancement Board (OWEB).

The BPA has determined that SR steelhead and SR spring/summer chinook salmon may occur within the project area. The SR steelhead were listed as threatened on August 18, 1997, (62 FR43937) and SR spring/summer chinook salmon were listed as threatened on April 22, 1992, (57 FR 14653). Protective regulations for SR steelhead were issued under section 4(d) of the ESA on July 10, 2000, (65 FR 42422). The proposed project is within critical habitat for SR spring/summer chinook salmon, designated on December 28, 1993, (58 FR 68543).

This Opinion reflects the results of the consultation process which included information provided in the BA as well as follow up correspondence which is all included herein as reference. The purpose of this Opinion is to determine whether the actions involved in the Grande Ronde Mainstem Fish Habitat Enhancement Project, Phase II in Union County are likely to jeopardize

the continued existence of SR steelhead, SR spring/summer chinook salmon, or result in the destruction or the adverse modification of the SR spring/summer chinook salmon critical habitat.

1.2 Proposed Action

This Opinion addresses the actions associated with the Grande Ronde Mainstem Fish Habitat Enhancement Project, Phase II. The overall objective of this project is to increase the quality of fish habitat and to accelerate the natural successional development and recovery of sustainable ecological function within the action area. Project activities involve realignment and definition of the channel at two locations. Actions will include placement of large woody debris in the channel and floodplain; construction of large boulder structures in the channel; removal of a railroad grade from the floodplain; reconnection of existing swales; and the planting of trees and shrubs along the banks. Livestock will be excluded from the area through a conservation easement funded and authorized through the Continuous Reserves Enhancement Program (CREP) and the BPA. This conservation easement and the actions associated with it are described and authorized in the NOAA Fisheries Opinion for the Longley Meadows Restoration Project (refer to: 2002/00375), issued July 17, 2002.

Implementation of actions associated with the project will be done during the ODFW authorized in-water work window between July 1 and October 15. However, the instream work window for this reach of the Grande Ronde River is listed as July 1 through July 31, due to the discovery of chinook salmon spawning activity below the confluence of Beaver Creek. Because this project is located six miles downstream of this finding, a modification to the in-water work window has been granted by ODFW, as documented by Tim Walter, Assistant District Fish Biologist, in a letter found in Appendix B of the BA. This modification is recommended with the understanding that monitoring for spawning activity in the area will be conducted. In this letter it is stated that, "if spawning activity occurs, instream work would then be restricted."

Measures will be taken to protect the localized populations of listed fish species. A fisheries biologist will monitor the project site by snorkeling and visual observation immediately prior (48 hours or less) to commencement of instream work to determine if sensitive salmonid species are present in the immediate construction areas. Based on observation from past seasons, it is anticipated that any salmonid species found within the project reach will be found principally in the backwater habitat and not in the main channel area of the project where heavy equipment will be operating and rock and wood material will be removed or placed. CTUIR, ODFW, and NRCS personnel will provide continuous construction inspection during implementation of the project.

1.2.1 Large Woody Debris

Large woody debris (LWD) will be placed throughout the action area in the form of:

- 27 whole conifer trees greater than 18" diameter at breast height (DBH) and 50' long with attached rootwads (RW),

- 39 RW, each with a minimum diameter of 4', with attached 15' bole,
- 30 logs greater than 18" DBH with attached RW with a minimum diameter of 4', and
- 39 footer logs greater than 18" DBH and 12' long.

Currently, the proposed action area is lacking is LWD and consequently shows signs of inefficient sediment routing and channel instability. The additions of LWD, both in the floodplain and the channel, is designed to slow water velocities and create sediment retention areas. The LWD that will be used in the project is blowdown that will come from various upland locations.

1.2.2 Boulder Placement

Boulders will be used to construct 3 cross-vane structures, 7 J-hooks, and 7 barbs at several different sites. Boulder size will range from 3 to 4 feet in diameter. The majority of the boulders will be obtained from designated on-site locations. The remainder will be brought in from outside sources.

The J-hook weirs will each consist of one limb, plus a sill perpendicular to the flow. The J-hook structures will extend from the bank of the river, into the middle of the channel, having a curved dimension on their outer edge. The elevation of the structure drops as it extends toward the center of the channe,l training the flow and forming a defined thalweg.

The barbs are similar in form and function to the J-hooks. Each barb will extend from the bank approximately 1/3 of the way into the channel and, as in the case of the J-hook, the elevation of the structure drops from the channel to the bank. The difference between the two structures is that the barbs do not have a sill extending from the limb.

The boulder cross-vanes are U-shaped grade-control structures that span the width of the channel.
These structures will be keyed into the bank to prevent end cutting and will serve to stabilize the channel by directing high flows away from the streambank and towards the center of the channel to create a defined thalweg. This should result in a deeper channel, decreased water temperatures, and a reduction in bank erosion.

1.2.3 Meander Construction

Meander construction will be done at two different locations within the action area, which will result in a total of 923 feet of improved sinuosity and channel form. Implementation of this part of the project will require the mechanical movement of bedload within the bankfull channel to combine gravel bars and form a single-channeled meander through an area where center bars have formed. At the two areas, existing meanders will be extended by moving bed material from the far bank and transporting it across the channel to create a developed pointbar. As material is removed from the far bank, it will be sorted by size so that the pointbar can be constructed with larger alluvial material towards the center of the channel and progressively finer material added

towards the bank. This is designed to result in a stable channel form with larger bed material in areas where shear stress will be highest and finer material on the bars where deposition would be expected.

The pointbars will be shaped to approximate 7° slope, which is similar to naturally-formed pointbars within the reach. Future channel stability will be improved though protection and promotion of natural vegetation, as well as extensive planting of specific riparian species in association with RW revetment structures on the far bank and whole tree placement on the near bank.

1.2.4 Floodplain Activities

Activities that will be executed in the floodplain include:

1. Removal of an abandoned railroad grade and reconnection of pre-existing channels and swales within the floodplain to improve overland flow during wet periods and high flow events. The railroad grade will be removed after all instream work requiring the use of heavy machinery has been completed. The location of the railroad grade and existing swales are indicated in Appendix A.

2. Eliminating unauthorized vehicle use and camping along the river by implementing measures such as road blockages. This will be done in coordination with the USFS Access and Travel Management Plan.

3. Noxious weeds will be eradicated through hand pulling in infested areas within the active floodplain.

4. Native riparian vegetation and conifer trees will be planted both by hand and with a stinger mounted on an excavator in all areas disturbed by construction activities.

1.2.5 Site-Specific Activities

The construction of the aforementioned boulder structures, manipulation of the channel's meanders, and the placement of LWD will necessitate the use of large machinery (459 total hours) and involve an extensive amount of in-water work. The following table lists each of the instream activities that will occur as a part of this project. The site numbers reference those found in Appendix B.

Table 1. Site-Specific Action Plan for Phase II of the Grande Ronde Mainstem Fish Habitat Enhancement Project

Site	Description of Actions	Required Materials	Equipment Type and Time
1	Construct key-member log jam on right bank. 4 large logs with RW and 2 whole trees will be placed. Boulders will be used for ballasts.	4 logs with RW 2 whole conifer trees 8 yd³ large boulders	Excavator-4 hrs
2	Meander bend construction. Excavate left bank for a length of 640 feet and deposit material along the right bank to form a pointbar. Material on point bar will be sorted and separated by size. Center of channel will be moved north approximately 80 feet. Install 12 RW along the outside of the meander.	12 RW with 15' bole 12 footer logs 14' long 60 yd³ large boulders	Excavator-31 hrs Loader-18 hrs
3	Place LWD obtained onsite in backwater areas.	LWD obtained onsite	Excavator-2 hrs
4	Install 12 RW along the outside of the meander. Remove and utilize existing boulders along the right bank. Remove approximately 300 feet of railroad grade. Contour the right bank.	12 RW with 15' bole 12 footer logs 14' long boulders	Excavator-15 hrs Loader-2 hrs
5	Place 3 whole trees in the channel.	3 whole conifer trees	Excavator-2 hrs
6	Construct 4 upstream rock barbs (60 yd³/barb) along the left bank. RW with attached boles will be incorporated into the rock barbs on the downstream side.	240 yd³ large boulders 4 logs with RW	Excavator-16 hrs
7	Place 6 whole trees along the outside of the meander along the left bank and in the floodplain. Channel morphology will be addressed in conjunction with the activities described at site 8.	6 whole conifer trees 7 yd³ large boulders	Excavator-10 hrs
8	Add 3 whole trees and LWD to the gravel point bar along the right bank. The trees will be placed at bankfull level. The LWD will be partially buried in the pointbar and stabilized with boulders	3 whole conifer trees 4 logs with RW 4 yd³ large boulders	Excavator-2 hrs
Site	**Description of Actions**	**Required Materials**	**Equipment Type and Time**
10	Key member log jam on the left bank. 4 logs with RW and 2 whole trees will be placed. Boulders will be used for ballasts.	4 logs with RW 2 whole conifer trees 8 yd³ large boulders	Excavator-4 hrs
11	Construct and shape point bar along left bank. Add 3 whole trees with RW. Trees will be stabilized with boulders.	3 whole conifer trees 6 yd³ large boulders	Excavator-2hrs Loader-4 hrs

12	Install 4 rock J-vanes (50yd³/vane) along 350 of the right bank at 85-foot intervals. LWD with attached RW will be placed along the right bank between the boulder structures.	200 yd³ large boulders 4 logs with RW	Excavator-16 hrs Loader-2 hrs
13	Vortex weir will be installed across the channel. Approximately 120, 3'+ boulders will be installed in an upstream U shaped structure. 2 whole trees will be placed in the channel below the rock structure.	100 yd³ large boulders 2 whole conifer trees	Excavator-12 hrs
14	Meander bend construction. Excavate left bank for a length of 285 feet and deposit material along right bank to form pointbar. Material on point bar will be sorted and separated by size. Center of channel will be moved north approximately 30 feet. Install 15 RW along the outside of the meander along the left bank.	15 RW with 15' bole 15 footer logs 14' long 75 yd³ large boulders	Excavator-38 hrs Loader-10 hrs
15	Add 2 whole trees to gravel point bar along right bank. Trees will be placed at bankfull level and stabilized with boulders.	2 whole conifer trees 4 yd³ large boulders	Excavator-2 hrs
16	Vortex rock weir will be installed across channel. Approximately 120, 3'+ boulders will be used to form an upstream U shaped structure. 2 whole conifers will be placed in the channel below the rock structure.	100 yd³ large boulders 2 whole conifer trees	Excavator-12 hrs
16a	Construct 3 upstream rock barbs (60 yd³/barb) along the right bank. Boulders from onsite will be used for these structures. LWD in the form of RW with attached boles will be incorporated into the rock barbs on the downstream side.	3 logs with RW boulders-obtained onsite	Excavator-12 hrs
17	Key log jam on right bank. 4 large logs with RW will be placed and boulders used for ballasts.	4 logs with RW 8 yd³ large boulders	Excavator-4 hrs
18	Vortex rock weir will be installed across the channel. Approximately 120, 3'+ boulders will be used to form an upstream U shaped structure. 2 logs on opposing banks will be installed in the channel below the rock structure.	100 yd³ large boulders 2 whole conifer trees	Excavator-12 hrs
Site	**Description of Actions**	**Required Materials**	**Equipment Type and Time**
19	Existing boulder barbs will be reconstructed to form upstream J-vanes. LWD in the form of RW with attached boles will be incorporated into the J-vanes on the downstream side.	boulders-obtained on site 3 logs with RW	Excavator-12 hrs

1.2.6 Monitoring

Project effectiveness will be monitored through a cooperative effort by CTUIR, ODFW, USFS, and NRCS. The monitoring plan will be a continuation of the monitoring being done for Phase I of this project, and will include the following components:

1. A survey of the aquatic habitat condition will be done throughout the entire project reach using the Hankin and Reeves methodology employed by Region 6 of the USFS.

2. Four channel morphology cross sections were established within the Phase II stream reach in 2002 at representative sites. These sites will be surveyed in conjunction with four sites located in the Phase I reach during the first, fifth, and tenth years following project implementation.

3. Permanent photographic points have been installed and will be replicated annually following project implementation for up to ten years.

4. Fish species presence and abundance will be sampled through snorkeling by ODFW throughout the project reach on a bi-annual basis.

5. Annual project monitoring will include a survey for noxious weed invasions.

6. Additional water quality information collected in the reach, such as temperature and sediment, will be used to evaluate the effectiveness of this project where appropriate.

1.3 Biological Information and Critical Habitat

The listing status and critical habitat designation of SR spring/summer chinook salmon and SR steelhead are outlined in section 1.1 of this Opinion. Biological information for SR steelhead is found in Busby *et al.* (1996) and that for SR spring/summer chinook salmon in Mathews and Waples (1991) and is summarized in Myers *et al.* (1998).

The proposed actions discussed within this Opinion are within designated critical habitat for SR spring/summer chinook salmon. Critical habitat for SR spring/summer chinook salmon was designated on December 28, 1993, (58 FR 68543). Critical habitat for SR chinook salmon encompasses the major Columbia River tributaries known to support this ESU, including the Salmon, Grande Ronde, Imnaha, Deschutes, John Day, Klickitat, Umatilla, Walla Walla, and Yakima Rivers, as well as the Columbia River and estuary. Critical habitat consists of all waterways below long-standing (more than 100 years duration) naturally-impassable barriers, and therefore includes the Grande Ronde Mainstem Fish Habitat Enhancement Project, Phase II project area. The riparian zone adjacent to these waterways is also considered critical habitat. This zone is defined as the area that provides the following functions: Shade, sediment, nutrient/chemical regulation, stream bank stability, and input of large woody debris/organic matter.

Essential features of the adult spawning, juvenile rearing, and adult migratory habitat for the SR steelhead and chinook salmon are: Substrate, water quality, water quantity, water temperature, water velocity, cover/shelter, food, riparian vegetation, space, and safe passage conditions. The essential features that the project may affect are: Substrate, water quality, water temperature, water velocity, cover/shelter, food, and riparian vegetation.

1.4 Evaluating Proposed Actions

The standards for determining jeopardy are set forth in section 7(a)(2) of the ESA as defined by 50 CFR Part 402 (the consultation regulations). NOAA Fisheries must determine whether the action is likely to jeopardize the listed species and/or whether the action is likely to destroy or adversely modify critical habitat. This analysis involves the initial steps of defining the biological requirements and current status of the listed species, and evaluating the relevance of the environmental baseline to the species' current status.

Subsequently, NOAA Fisheries evaluates whether the action is likely to jeopardize the listed species by determining if the species can be expected to survive with an adequate potential for recovery. In making this determination, NOAA Fisheries must consider the estimated level of mortality attributable to: (1) Collective effects of the proposed or continuing action, (2) the environmental baseline, and (3) any cumulative effects. This evaluation must take into account measures for survival and recovery specific to the listed salmonid's life stages that occur beyond the action area. If NOAA Fisheries finds that the action is likely to jeopardize, NOAA Fisheries must identify reasonable and prudent alternatives for the action.

Furthermore, NOAA Fisheries evaluates whether the action, directly or indirectly, is likely to destroy or adversely modify the listed species' designated critical habitat. NOAA Fisheries must determine whether habitat modifications appreciably diminish the value of critical habitat for both survival and recovery of the listed species. NOAA Fisheries identifies those effects of the action that impair the function of any essential element of critical habitat. NOAA Fisheries then considers whether such impairment appreciably diminishes the habitat's value for the species' survival and recovery. If NOAA Fisheries concludes that the proposed action will destroy or adversely modify critical habitat it must identify any reasonable and prudent alternatives available.

For the proposed action, NOAA Fisheries' analysis considers direct or indirect mortality of fish attributable to the action. NOAA Fisheries' critical habitat analysis considers the extent to which the proposed action impairs the function of essential elements necessary for juvenile and adult migration, spawning, and rearing of the SR spring/summer chinook salmon under the existing environmental baseline.

1.4.1. Biological Requirements

The first step NOAA Fisheries uses for applying the ESA section 7(a)(2) to listed salmon and steelhead is to define the species' biological requirements that are most relevant. NOAA

Fisheries also considers the current status of the listed species taking into account population size, trends, distribution and genetic diversity. To assess the current status of the listed species, NOAA Fisheries starts with the determinations made in its decision to list SR salmon and steelhead for ESA protection, and also considers new data available that is relevant to the determination.

The relevant biological requirements are those necessary for SR spring/summer chinook salmon and SR steelhead to survive and recover to naturally-reproducing population levels, at which time protection under the ESA would become unnecessary. Adequate population levels must safeguard the genetic diversity of the listed stock, enhance their capacity to adapt to various environmental conditions, and allow them to become self-sustaining in the natural environment.

For this consultation, the biological requirements are improved habitat characteristics that function to support successful adult and juvenile migration, spawning and rearing. SR spring/summer chinook salmon and SR steelhead survival in the wild depends upon the proper function of certain ecosystem processes, including habitat formation and maintenance. Restoring functional habitats depends largely on allowing natural processes to increase their ecological function, while at the same time removing adverse impact of current practices. In conducting analysis of habitat altering actions and essential habitat elements, NOAA Fisheries defines the biological requirements in terms of a concept called Properly Functioning Condition (PFC) and utilized a "habitat approach" to its analysis (NMFS 1999).

1.4.2 Environmental Baseline

The current status of SR spring/summer chinook salmon ESU has improved somewhat since being listed as threatened in 1992. In 1994, the species was proposed for listing as endangered due to very low numbers of adults observed at Lower Granite Dam on the lower SR. However, an improvement in the adult return levels as seen in 1997, promoted the withdrawal of the proposed listing status change in 1998. Recent returns show continuing improvements in adult returns, at least for some portions of the ESU. The counts at Lower Granite Dam for spring/summer chinook salmon were 14,320 in 1998, 6,556 in 1999, 37,755 in 2000, and 18,972 in 2001 (http://www.nwp.usace. army.mil/op/fishdata/lwrgrant.htm). Lower Granite Dam is located at river mile (RM) 107.5 on the mainstem of the Snake River, about 70 miles below (downstream of) the confluence with the Grande Ronde River with the Snake River.

The current range-wide status of the identified ESUs may be found in Busby *et al.* (1996) and Myers *et al.* (1998). The proposed action will occur within the range of SR steelhead and SR spring/summer chinook salmon. The defined action area is the area that is directly and indirectly affected by the proposed action. The direct effects occur at the project site and may extend upstream or downstream based on the potential for impairing fish passage, hydraulics, sediment and pollutant discharge, and the extent of riparian habitat modifications. Indirect effects may occur throughout the watershed, where actions described in this Opinion lead to additional activities, or affect ecological functions, contributing to stream degradation. As such, the action area for the proposed activities include the immediate portions of the watershed containing the

project, and those areas upstream and downstream that may reasonably be affected, temporarily or in the long term. For the purposes of this Opinion, the action area is defined as the 1.5 miles of the mainstem of the Grande Ronde River as well the surrounding riparian and stream areas that will be impacted by the construction activities.

Environmental baseline conditions within the action area were evaluated for the subject actions at the project level and the watershed scales. The results of this evaluation, based on the "matrix of pathways and indicators" (MPI) described in *Making ESA Determinations of Effect for Individual or Grouped Actions at the Watershed Scale* (NMFS 1996) follow. This method assesses the current condition of instream, riparian, and watershed factors that collectively provide properly functioning aquatic habitat essential for the survival and recovery of the species.
The effects of proposed actions are expressed in terms of the expected effect (restore, maintain, or degrade) on aquatic habitat factors in the project area. Currently temperature, sediment, LWD, pool frequency and quality, width/depth ratio, and streambank condition are not properly functioning. Substrate, off-channel habitat, refugia, drainage network increase, road density location, disturbance history, riparian reserves, and floodplain connectivity are rated as being at risk. For the proposed actions, all of the aforementioned conditions within the project area will be improved with the exception of chemical contaminants, physical barriers, and off-channel habitat. These indicators will be maintained and are currently properly functioning. Road density and disturbance history will be maintained at their at risk condition due to the fact that they are outside of the scope of this project.

Past management activities such as splash dams, LWD and rock removal from the channel, livestock grazing, channelization, and recreational vehicle use, have the left the stream reaches in the project area functioning well below levels that promote healthy salmonid populations. A lack of LWD, channel sinuousity, and pools characterize the river throughout the project area. The formation of large, unstable gravel bars indicate that sediment routing processes in the area are out of balance. Vegetated overhanging banks are found along less then 5% of the total bank length in the action area.

Water temperatures throughout the project area are high during the summer months According to data obtained by the USFS and ODEQ in 1998, temperatures in the mainstem Grande Ronde River upstream of the project site annually exceed 26°C. Adult SR spring/summer chinook salmon observed in the project area during summer periods have been moving upstream and have not been holding for extended periods or spawning within the project area. Sampling done through snorkeling during periods of high water temperature has shown that juvenile salmonids in the project reach are located in back water areas.

Sediment distribution in the project area was measured at two separate locations using the Wolman Pebble Count method. The D84 sediment size at both sites corresponded to a cobble material with a median diameter of 64mm to 96mm. Sediment distribution was segregated between fines and cobbles with the percentage of fines at each site being relatively low (6% and 11%). This reach of the Grande Ronde River is an area that would be expected to have a

significant amount of fine sediment accumulation in key areas due to the low channel gradient and wide valley form. The results of the pebble count however suggest that stream energy may be slightly higher than expected and that suspended fines are transported through this reach due to high stream energy. Transported fines are extremely important in providing material for maintaining active floodplains in the process of building stable banks.

Interest from local landowners to improve this section of the Grande Ronde River and address bank erosion problems catalyzed the formation of this project. A planning group of interested parties comprised of local agencies and personnel working on similar issues in the upper Grande Ronde River was formed and designated the action area for the Grande Ronde Mainstem Fish Habitat Enhancement Project as is described in this Opinion. Due to the valley form, size, and complexity at this location, the action area was broken into three sections. The work in these sections is being implemented in three separate phases. Phase I was implemented during the summer and fall of 1998 with additional work completed in the floodplain during the fall of 1999. Activities associated with Phase I included riparian planting, installation of RW and LWD, and the construction of vortex weirs and J-vanes.

The planning team for Phase I monitored the reaction of the river and the floodplain to the work that was done following the 1999 and 2000 spring run-off periods. These observations were used to shape the designs for Phase II. A monitoring plan was implemented for Phase I that included channel morphology measurements, aquatic habitat measurement, snorkeling for salmonid presence, and photographs. The site was also visited by planning team members on numerous occasions in order to observe different flow conditions. Key points of concern for the first few years following implementation were structure stability, direct flow influence at locations of concern, and channel stability. Additional objectives identified for Phase I, such as channel narrowing and overhanging bank development are expected to be long-term changes that are not measurable during the first few years following implementation.

Phase I structures performed as planned during the 1999 and 2000 years. Positive morphologic changes and progress towards the goals of improving salmonid habitat and channel stability were seen. The channel changes and structures were successful at arresting bank erosion at the two key points of concern. The five reconstructed boulder vortex weirs on USFS land have maintained the associated scour pools and showed no signs of failure. Additional boulder weirs and structures on the private property also performed as planned during high flows with no observed failures and only minor erosion and bank adjustment. One vortex weir and three J-vanes on the private property performed especially well by defining a narrower channel and thalweg and directing bedload deposition to pointbars. In the locations where the channel was relocated and sinuosity mechanically increased, the newly constructed meanders and pointbars retained their form and improvements in bank stability were apparent. The LWD placed in the channel, on the banks, and used for RW revetments remained stable and intact.

This Opinion describes activities planned for Phase II. Phase II is located along a unique, low-gradient (0.4/100 ft) section of the upper Grand Ronde River along the alluvial fans of Bear and Jordan Creeks. Low gradient sections in the Grande Ronde mainstem between La Grande and

Meadow Creek are limited and provide morphological characteristics important in the formation of diverse aquatic habitat. This area has the potential to provide key holding habitat for adult SR spring/summer chinook salmon and SR steelhead as well as winter rearing habitat for juveniles.

Adult SR chinook salmon migrate through the Longely Meadows area in the Grande Ronde River during the spring and early to mid-summer months on their upstream migration to the Upper Grande Ronde subbasin. It is likely that short-term adult SR chinook salmon holding occurs in the Grande Ronde within the Longley Meadows area. The Grande Ronde River in this reach provides several large holding pools suitable for adult SR chinook salmon to hold in as well as cold water seeps and springs that provide micro refuges. Adult SR chinook salmon have been observed in the project area during summer months, however they have been moving upstream and have not been holding for extended periods or spawning within this reach of the Grande Ronde River. Evidence of SR chinook spawning activity in the mainstem of the Grande Ronde downstream of Starkey, Oregon was documented by ODFW. Two test digs were observed in 1999: (1) In Meadow Creek near the confluence with the Grande Ronde River, approximately 9 miles upstream from the project area; and (2) near the confluence of Beaver Creek, approximately 6 miles upstream from the project site. Juvenile SR chinook salmon have been observed within the project reach during winter months, but not during summer months when water temperatures are high.

SR steelhead can be found throughout the Grande Ronde system, including Bear and Jordan Creeks. Annual steelhead redd surveys conducted by ODFW between 1966 and 1982 on the lower 7n miles of Bear Creek indicated an average of 9.7 redds per mile with a high of 71 redds in 1966. Juvenile fish population surveys have not been conducted in project area streams, therefore no data is currently available regarding existing fish populations. Some limited presence/absence sampling was conducted by CTUIR and ODFW in early 1998 near the confluence of Bear Creek within the Grande Ronde River. Limited sampling indicated that backwater habitats associated with Bear and Jordan Creeks and the Grande Ronde River were likely utilized extensively for juvenile rearing.

The planning and designs for Phase III will be based on the demonstrated success of Phase II of this project. The Grande Ronde Fish Habitat Enhancement Project is being coordinated with project planning that is ongoing for the tributaries of Bear Creek and Jordan Creek. These tributaries flow through and enter the Grande Ronde River in Longley Meadows, an important historical floodplain and connected wetland.

Details regarding this project and the action area can be found in the Longley Meadows Restoration Project Biological Assessment and Essential Fish Habitat Assessment, as well as the NOAA Fisheries Biological Opinion for the Longley Meadows Restoration Project (refer to: 2002/00375), issued on July 17, 2002.

1.5 Analysis of Effects

1.5.1 Effects of Proposed Actions

The effects determination in this Opinion was made using a method for evaluating current aquatic conditions, the environmental baseline, and predicting effects of actions on them. The effects of the action are expressed in terms of the expects effect (restore, maintain, or degrade) on aquatic habitat factors in the action area. For the proposed actions, SR steelhead and SR spring/summer chinook salmon habitat indicators for the action area will either be improved or maintained in the long term.

Impacts of the proposed project to stream habitat and fish populations can be separated into direct and indirect effects. Direct effects are those that contribute to the immediate loss or harm to individual fish or embryos (*e.g.,* heavy equipment directly crushing a fish, crushing or destabilizing a redd that results in the actual destruction of embryos, dislodging the embryos from the protective nest and ultimately destroying eggs). Indirect effects are those impacts which occur at a later time, causing specific habitat features (*e.g.,* undercut banks, sedimentation of spawning beds, loss of pools), localized reductions in habitat quality (*e.g.*, sedimentation, loss of riparian vegetation, changes in channel stability and structure), and which ultimately cause loss or reduction of populations of fish, or reductions in habitat quantity and/or quality.

In the short term, the activities associated with the proposed project have the potential to directly harm juvenile fish or disturb rearing juveniles. Disturbance of riparian and instream habitat is expected, and a temporary increase of sediment and turbidity is unavoidable. Increases in sediment and turbidity could abrade and clog fish gills, reduce light penetration and prevent feeding by sight feeders, stop migration, and cause any fish in the area to avoid the disturbed reaches of the creek. Increased sedimentation may result in minor siltation of downstream spawning gravels. Areas of the streambank disturbed during construction will be revegetated, which will eventually restore function in those areas. The timing of the work, the limited use of equipment in the water, and the small size of the disturbed area will all serve to minimize the magnitude of the short-term effects. The effects of these activities on SR steelhead and SR spring/summer chinook salmon, and their aquatic habitat factors will be limited by implementing construction methods and approaches (that are included in project design) intended to avoid or minimize impacts.

In the long term, actions associated with the project will: (1) Increase shallow groundwater storage capacity of the Longley Meadows area and improve connection with the surface waters of the Grande Ronde River; (2) enhance the formation of a sinuous channel; (3) increase channel length and stability; (4) establish communities of native, wetland dependent plant species within the RHCA to improve floodplain function; (5) reduce streambank erosion and sediment transport; (6) enhance aquatic habitat diversity and complexity; and (7) improve salmonid rearing habitat by increasing water quality and decreasing water temperatures.

Consequently, NOAA Fisheries does not expect that the effects of the actions associated with the project will diminish the long-term value of the habitat for the survival of SR steelhead and SR spring/summer chinook salmon.

1.5.2 Cumulative Effects

Cumulative effects are defined in 50 CFR 402.02 as "those effects of future State or private activities, not involving federal activities, that are reasonably certain to occur within the action area of the federal action subject to consultation." The "action area" for this consultation is described in section 1.4.2 of this Opinion.

The BPA identified no specific state or private actions that are reasonably certain to occur in the future that would negatively affect SR steelhead, SR spring/summer chinook salmon or their designated critical habitat within the action area. NOAA Fisheries is not aware of any significant change in non-federal activities that are reasonably certain to occur within the action area and assumes that future private and state actions will continue at similar intensities as in recent years.

1.6 Conclusion

NOAA Fisheries has determined that, when the effects of the subject actions addressed in this Opinion are added to the environmental baseline and cumulative effects occurring in the action area, they are not likely to jeopardize the continued existence of SR spring/summer chinook salmon or SR steelhead. Additionally, NOAA Fisheries concludes that the subject actions would not cause adverse modification or destruction of designated critical habitat for SR spring/summer chinook salmon, however, NOAA Fisheries believes that the proposed action will cause some minor short-term increases in stream turbidity and sedimentation rates in the Grande Ronde River. These conclusions were reached because the actions will result in long-term improvements in fish passage, condition of riparian vegetation, stream shading, substrate embeddedness, and streambank stability, thereby improving instream habitat by increasing the amount of large woody debris in the channel and increasing pool frequency and quality within the action area of Grande Ronde River. Thus, the proposed action is not expected to impair properly functioning habitats, appreciably reduce the functioning of already impaired habitats, or retard the long-term progress of impaired habitats toward proper functioning condition which is essential to the long-term survival and recovery at the population or ESU level.

1.7 Conservation Recommendations

Section 7 (a)(1) of the ESA directs Federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of the threatened and endangered species. The following conservation recommendation is a discretionary measure suggested to minimize or avoid adverse effects of proposed actions on listed species, to minimize or avoid adverse modification of critical habitat, or to develop additional information.

1. NOAA Fisheries recommends that the BPA implement in-water construction activities during the portion of the in-water work window when temperatures are highest, thereby limiting the potential to impact salmonids in both the immediate project area and adjacent backwater habitats.

1.8 Reinitiation of Consultation

Consultation must be reinitiated if: (1) The amount or extent of taking specified in the Incidental Take Statement is exceeded, or is expected to be exceeded; (2) new information reveals effects of the action may affect listed species in a way not previously considered; (3) the action is modified in a way that causes an effect on listed species that was not previously considered; or (4) a new species is listed or critical habitat is designated that may be affected by the action (50 CFR 402.16). To reinitiate consultation, BPA must contact the NOAA Fisheries Habitat Conservation Division, Oregon Habitat Branch and refer to 2002/00986.

2. INCIDENTAL TAKE STATEMENT

Sections 9 and rules promulgated under section 4(d) of the ESA prohibit any taking (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct) of listed species without a specific permit or exemption. "Harm" is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, and sheltering. "Harass" is defined as actions that create the likelihood of injuring listed species by annoying it to such an extent as to significantly alter behavior patterns which include, but are not limited to, breeding, feeding, and sheltering. Incidental take is take of listed animal species that results from, but is not the purpose of, the Federal agency or the applicant carrying out an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to, and not intended as part of, the agency action is not considered prohibited taking provided that such taking is in compliance with the terms and conditions of this incidental take statement.

An incidental take statement specifies the impact of any incidental taking of endangered or threatened species. It also provides reasonable and prudent measures that are necessary to minimize impacts and sets forth terms and conditions with which the action agency must comply in order to implement the reasonable and prudent measures.

2.1 Amount or Extent of Take

NOAA Fisheries anticipates that the proposed action is reasonably certain to result in the incidental take of listed species in this Opinion because of detrimental effects from increased sediment levels (non-lethal), possible contamination from pollutants from the large machinery that will be used during construction activities (lethal), and the potential for incidental take during in-water work (lethal and non-lethal). Effects of actions covered by this Opinion are largely unquantifiable in the short term, and are not expected to be measurable as long-term

effects on habitat or population levels. Therefore, even though NOAA Fisheries expects some low level incidental take to occur due to these actions as are covered in this Opinion, the best scientific and commercial data available are not sufficient to enable NOAA Fisheries to estimate a specific amount of incidental take to the species itself. In instances such as these, the NOAA Fisheries designates the expected level of take as "unquantifiable".

2.2 Effect of Take

In this Opinion, NOAA Fisheries has determined that the level of anticipated take is not likely to result in jeopardy to SR steelhead or SR spring/summer chinook salmon destroy or adversely monitor their designated critical habitat when the following reasonable and prudent measures are implemented.

2.3 Reasonable and Prudent Measures

In this Opinion, the NOAA Fisheries has determined that the level of anticipated take is not likely to jeopardize SR steelhead, SR spring/summer chinook salmon, or to destroy or adversely modify designated SR spring/summer chinook salmon critical habitat when the following reasonable and prudent measures are implemented:

1. To minimize the amount and extent of incidental take from in-water construction activities, measures shall be taken to limit the duration and extent of in-water work, and to time such work when the impacts to SR chinook salmon and SR steelhead are minimized.

2. To minimize the amount and extent of incidental take from construction activities in or near the creeks, effective erosion and pollution control measures shall be developed and implemented throughout the area of disturbance. The measures shall minimize the movement of soils and sediment both into and within the river, and will stabilize bare soil over both the short term and long term.

3. To minimize the amount and extent of take from loss of instream habitat and to minimize impacts to critical habitat, measures shall be taken to minimize impacts to riparian and in stream habitat, or where impacts are unavoidable, to replace or restore lost riparian and in stream function.

4. To ensure effectiveness of implementation of the project design, all erosion control measures and planting for site restoration shall be monitored and evaluated both during and following construction, and meet criteria as described below in the terms and conditions.

2.4 Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the BPA must comply with the following terms and conditions, which will implement the reasonable and prudent measures described above. These terms and conditions should be incorporated into construction contracts and subcontracts to ensure that the work is carried out in the manner prescribed. Implementation of the terms and conditions within this Opinion will further reduce the risk of impacts to fish habitat. These terms and conditions are non-discretionary.

1. To implement Reasonable and Prudent Measure #1 (in-water work), the BPA shall ensure that:

    a. The following overall design conditions are met:
        i. Construction impacts will be confined to the minimum area necessary to complete the project. As much work as possible proposed for below the ordinary high water line will be completed during low flow periods and in the dry.
        ii. All work within the active channel will be completed within the ODFW approved in-water work period for this area, July1 through October 15. Extensions of the in-water work period, including those for work outside the wetted perimeter or the stream but below the ordinary high water mark, must be approved by biologists from NOAA Fisheries. Project operations will cease under high flow conditions that may result in inundation of the project area, except for efforts to avoid or minimize resource damage.
        iii. Measures will be taken to protect localized populations of listed fish species. Passage will be provided for any adult or juvenile salmonid species present in the project area during construction, and after construction for the life of the project. A fisheries biologist will monitor the project site by snorkeling and visual observation immediately prior (no more then 48 hours) to commencement of instream work to determine if sensitive salmonid species are present in the immediate construction areas. In the event that fish are present, in-water activities will cease until an ODFW and/or CTUIR fisheries biologist is contacted and appropriate measures taken to ensure that appropriate protection measures are implemented before in-water work proceeds.
        iv. CTUIR, ODFW, and NRCS personnel will provide continuous construction inspection during implementation of the project.
        v. Monitoring for spawning activity in the action area will be conducted throughout the time period adult fish may be present. If spawning activity occurs, instream work will stop until a CTUIR and/or ODFW fisheries biologist is contacted and appropriate measures defined and executed to ensure that spawning fish are not adversely affected by activities associated with the project in any way.

2. To implement Reasonable and Prudent Measure #2 (erosion and pollution control measures), the BPA shall ensure that:

   a. The work area will be well isolated from the active flowing stream to minimize the potential for sediment entrainment. Sediment levels will be monitored to ensure compliance with state water quality standards. All project operations, except efforts to minimize sedimentation, will cease if sediment levels exceed state water quality standards.
   b. A pollution and erosion control plan (PECP) will be developed to prevent point-source pollution related to construction operations. The PECP will contain the pertinent elements listed below and meet requirements of all applicable laws and regulations.
      i. Methods that will be used to prevent erosion and sedimentation associated with access roads, stream crossings, construction sites, equipment and material storage sites, fueling operations and staging areas.
      ii. Methods that will be used to confine and remove and dispose of excess concrete, cement, and other mortars or bonding agents, including measures for washout facilities.
      iii. A description of the hazardous products or materials that will be used, including inventory, storage, handling, and monitoring.
      iv. A spill containment and control plan with notification procedures, specific clean up and disposal instructions for different products, quick response containment and clean up measures that will be available on site, proposed methods for disposal of spilled materials, and employee training for spill containment.
      v. Measures that will be taken to prevent construction debris from falling into any aquatic habitat. Any material that falls into a stream during construction operations will be removed in a manner that has a minimum impact on the streambed and water quality.
      vi. Equipment that is used for work shall be cleaned prior to entering the job site. External oil and grease shall be removed, along with dirt and mud. Untreated wash and rinse water will not be discharged into construction area without adequate treatment. Areas for fuel storage and servicing of construction equipment and vehicles will be located at least 300 feet away from any body of water.
      vii. The contractor shall develop and implement a site-specific spill prevention, containment, and control plan (SPCCP) that includes notification procedures, and is responsible for containment and removal of any toxins released. The contractor will be monitored by the BPA to ensure compliance with the SPCCP.
      viii. The person identified as the Erosion and Pollutant Control Manager (EPCM) shall also be responsible for the management of the contractors' SPCCP. In the event of a hazardous materials or petrochemicals spill, the EPCM shall be responsible for:

(1) Taking immediate action to recover toxic materials from further impacting aquatic or riparian resources;
(2) Documenting a detailed description of the quantity, type, source, reason for the spill, and actions taken to recover materials;
(3) Notifying necessary state officials if a spill does occur;
(4) Ensuring that all refueling of equipment will take place 300 feet from any body of water and auxiliary fuel tanks will not be stored on bridges, roads or within the two-year flood plain; and
(5) Inspecting all machinery for leaks prior to on-site use.

3. To implement reasonable and prudent measure #3 (riparian and instream functions), the BPA shall ensure that:

a. Construction activities will be done in a way which minimizes disturbance of existing riparian vegetation. Where disturbance is necessary, native vegetation will be clipped by hand where feasible so that roots remain intact. In all areas that require removal or involve mortality of riparian vegetation, reseeding and/or replanting of vegetation with native species will occur.
b. Existing vegetation conditions shall be monitored to ensure successful establishment.
c. Immediately implement re-vegetation procedures to replace any functional riparian components dying because of construction. Only native vegetation will be replanted. Soil erosion control fabric will be used in conjunction with seeding to reduce sedimentation releases for the disturbed areas.
d. The BPA shall monitor the success of planting within, and adjacent to, the construction area. The monitoring of any new planting should be done one year following construction and again at the third and the fifth year. The BPA will supply a report each year to the NOAA Fisheries that shall include photos of the planting in the project area.
e. Failed planting will be replaced yearly, for a period of five years.

4. To implement reasonable and prudent measures #4 (monitoring and reporting), the BPA shall:

a. Submit a report to NOAA Fisheries within 120 days of completing the project. Describe the BPA's success meeting conservation recommendations above. Include the following information:
i. <u>Project identification</u>.
(1) Project name
(2) Starting and ending dates of work completed for this project
(3) BPA contact person.
ii. <u>Pollution and erosion control</u>. A summary of all pollution and erosion control inspection reports, including descriptions of any failures

experienced with erosion control measures, efforts made to correct them and a description of any accidental spills of hazardous materials.

iii. Site restoration. Documentation of the following conditions:
   (1) Finished grade slopes and elevations
   (2) Planting composition and density
   (3) A plan to inspect and, if necessary, replace failed plantings and structures for a period of three years

iv. A narrative assessment of the effects of the project.

v. Photographic documentation of environmental conditions at the project site before, during and after project completion.
   (1) Photographs will include general project location views and close-ups showing details of the project area and project, including pre- and post-construction.
   (2) Each photograph will be labeled with the date, time, photo point, project name, the name of the photographer, and a comment describing the photograph's subject.
   (3) Relevant habitat conditions include characteristics of channels, streambanks, riparian vegetation, flows, water quality, and other visually discernable environmental conditions at the project area, and upstream and downstream of the project.

b. Submit monitoring reports to:
NOAA Fisheries
Oregon Habitat Branch, Habitat Conservation Division
Attn: 2002/00986
525 NE Oregon Street, Suite 500
Portland, Oregon 97232-2778

c. If a dead, injured, or sick endangered or threatened species specimen is located, initial notification must be made to the NOAA Fisheries' Law Enforcement Office, located at Vancouver Field Office, 600 Maritime, Suite130, Vancouver, Washington 98661 or call 360.418.4246. Care should be taken in handling sick or injured specimens to ensure effective treatment and care or the handling of dead specimens to preserve biological material in the best possible state for later analysis of cause of death. In conjunction with the care of sick or injured endangered and threatened species or preservation of biological materials from a dead animal, the finder has the responsibility to carry out instructions provided by Law Enforcement to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed.

3. MAGNUSON-STEVENS ACT

3.1 Background

The objective of the essential fish habitat (EFH) consultation is to determine whether the proposed action may adversely affect designated EFH for relevant species, and to recommend conservation measures to avoid, minimize, or otherwise offset potential adverse effects to EFH resulting from the proposed action.

3.2 Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-297), requires the inclusion of EFH descriptions in Federal fishery management plans. In addition, the MSA requires Federal agencies to consult with NOAA Fisheries on activities that may adversely affect EFH.

EFH means those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (MSA §3). For the purpose of interpreting the definition of essential fish habitat: "Waters" include aquatic areas and their associated physical, chemical, and biological properties that are used by fish, and may include aquatic areas historically used by fish where appropriate. "Substrate" includes sediment, hard bottom, structures underlying the waters, and associated biological communities. "Necessary" means the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem, and "spawning, breeding, feeding, or growth to maturity" covers a species' full life cycle (50CFR600.110).

Section 305(b) of the MSA (16 U.S.C. 1855(b)) requires that:

- Federal agencies must consult with NOAA Fisheries on all actions, or proposed actions, authorized, funded, or undertaken by the agency, that may adversely affect EFH;
- NOAA Fisheries shall provide conservation recommendations for any Federal or state activity that may adversely affect EFH;
- Federal agencies shall within 30 days after receiving conservation recommendations from NOAA Fisheries provide a detailed response in writing to NOAA Fisheries regarding the conservation recommendations. The response shall include a description of measures proposed by the agency for avoiding, mitigating, or offsetting the impact of the activity on EFH. In the case of a response that is inconsistent with the conservation recommendations of NOAA Fisheries, the federal agency shall explain its reasons for not following the recommendations.

The MSA requires consultation for all actions that may adversely affect EFH, and does not distinguish between actions within EFH and actions outside EFH. Any reasonable attempt to encourage the conservation of EFH must take into account actions that occur outside EFH, such as upstream and up slope activities, that may have an adverse effect on EFH. Therefore, EFH

consultation with NOAA Fisheries is required by Federal agencies undertaking, permitting or funding activities that may adversely affect EFH, regardless of its location.

3.3 Identification of EFH

The Pacific Fisheries Management Council (PFMC) has designated EFH for federally-managed fisheries within the waters of Washington, Oregon, and California. The PFMC has designated EFH for three species of Pacific salmon: Chinook salmon (*O. tshawytscha*); coho (*O. kisutch*); and Puget Sound pink salmon (*O. gorbuscha*) (PFMC 1999). Freshwater EFH for Pacific salmon includes all those streams, lakes, ponds, wetlands, and other water bodies currently, or historically accessible to salmon in Washington, Oregon, Idaho, and California, except areas upstream of certain impassable man-made barriers (as identified by the PFMC), and longstanding, naturally-impassable barriers (*i.e.*, natural waterfalls in existence for several hundred years). In estuaries and marine areas, designated salmon EFH extends from the near shore and tidal submerged environments within state territorial waters out to the full extent of the exclusive economic zone (370.4 km) offshore of Washington, Oregon, and California north of Point Conception to the Canadian border. Detailed descriptions and identifications of EFH for salmon are found in Appendix A to Amendment 14 to the *Pacific Coast Salmon Plan* (PFMC 1999). Assessment of potential adverse effects to these species' EFH from the proposed action is based on this information.

3.4 Proposed Actions

The proposed actions are detailed above in section 1.1. The action area includes a 1.5 mile section of the mainstem of the Grande Ronde River. This area has been designated as EFH for various life stages of chinook salmon.

3.5 Effects of Proposed Action

As described in detail in ESA portion of this consultation**,** the proposed activities may result in detrimental short-term adverse effects to a variety of habitat parameters.

3.6 Conclusion

NOAA Fisheries believes that the proposed action would adversely affect the EFH for chinook salmon.

3.7 EFH Conservation Recommendations

Pursuant to section 305(b)(4)(A) of the Magnuson-Stevens Act, NOAA Fisheries is required to provide EFH conservation recommendations for any Federal or state agency action that would adversely affect EFH. The conservation measures proposed for the project by the BPA, all of the reasonable and prudent measures and the terms and conditions contained in sections 2.2 and 2.3 are applicable to salmon EFH. Therefore, NOAA Fisheries incorporates each of those measures here as EFH recommendations.

3.8 Statutory Response Requirement

Please note that the Magnuson-Stevens Act (section 305(b)) and 50 CFR 600.920(j) requires the federal agency to provide a written response to NOAA Fisheries after receiving EFH conservation recommendations within 30 days of its receipt of this letter. This response must include a description of measures proposed by the agency to avoid, minimize, mitigate or offset the adverse impacts of the activity on EFH. If the response is inconsistent with a conservation recommendation from NOAA Fisheries, the agency must explain its reasons for not following the recommendation.

3.9 Supplemental Consultation

The BPA must reinitiate EFH consultation with NOAA Fisheries if either action is substantially revised or new information becomes available that affects the basis for NOAA Fisheries' EFH conservation recommendations (50 CFR 600.920).

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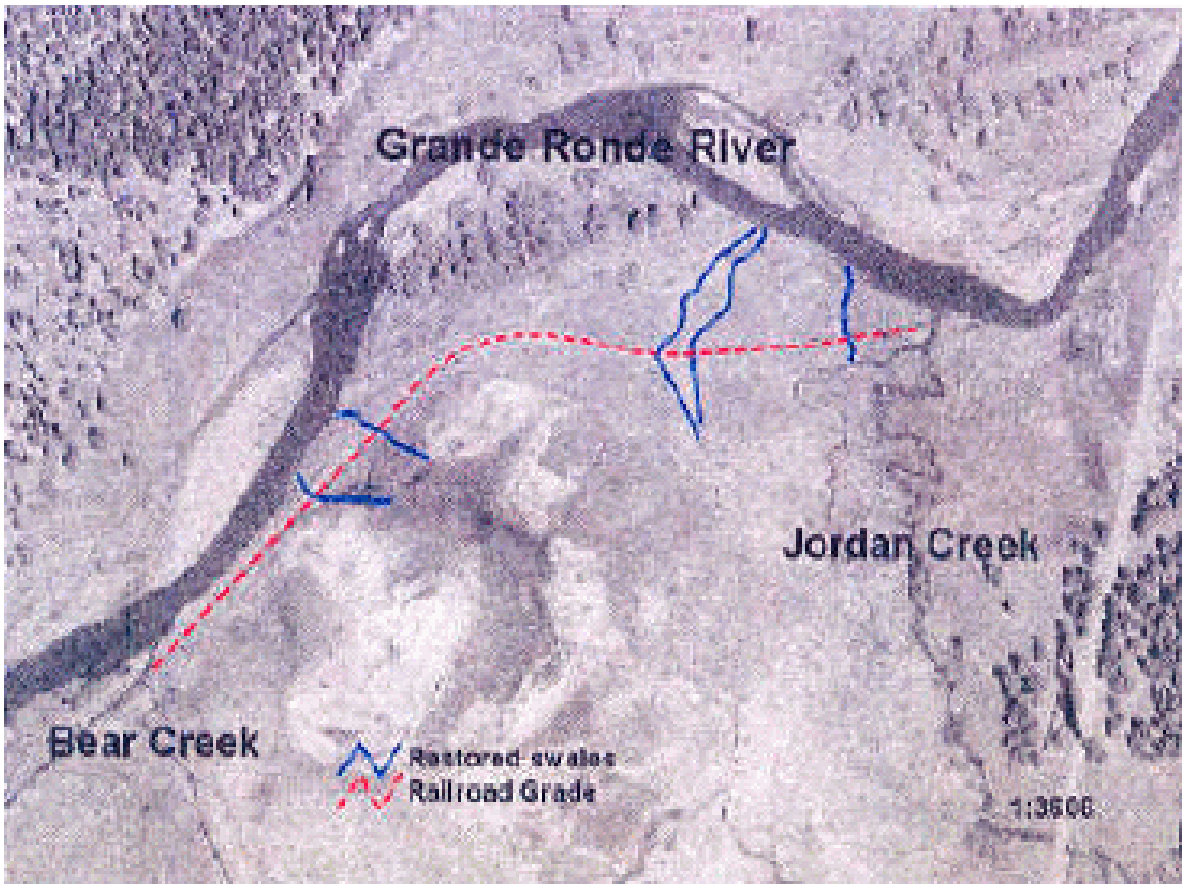
Appendix A. Railroad Grade and Swale Locations in Longley Meadows

This image was taken from page 15 if the BA.



Appendix B. Site Specific Action Plan for Phase II of the Grande Ronde Mainstem Fish Habitat Enhancement Project

This image was taken from Appendix A of the BA.